

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A data link system configured to operate with a differential transmission line having a differential input and a differential output, the data link system comprising:

~~a differential transmission line having a differential input and a differential output;~~

a transmitter de-emphasis circuit coupled to said input of said differential transmission line, said transmitter de-emphasis circuit including,

a first transconductance device having a fixed gain;

a second transconductance device, coupled in parallel with said first transconductance device, and having a variable gain; and

a summer device for summing current outputs of said first and second transconductance devices; and

an equalizer coupled to said differential output of said differential transmission line, said equalizer having an inductor connected between first and second transmission lines ~~[[of]]~~ forming said differential transmission line.

2. (Currently Amended) The data link system of claim 1, wherein said transmitter de-emphasis circuit pre-distorts said differential transmission line input to compensate for frequency distortion caused by said differential transmission line.

3. (Previously Presented) The data link system of claim 1, wherein said transmitter de-emphasis circuit has a gain that increases with frequency across a frequency band of interest.

4. (Currently Amended) The data link system of claim 1, wherein a signal loss of said differential transmission line increases with frequency, and wherein said transmitter de-emphasis circuit has a gain that increases with frequency to offset said signal loss of said differential transmission line.

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Previously Presented) The data link system of claim 1, wherein said equalizer is a passive equalizer.

9. (Currently Amended) The data link system of claim 1, wherein said transmitter de-emphasis circuit reduces an amplitude of low frequency components in ~~[[said]]~~ an input signal.

10. (Currently Amended) The data link system of claim 1, wherein said differential transmission line is one of a coaxial cable, an optical fiber, and a twisted pair.

11. (Canceled)

12. (Currently Amended) The data link system of claim 1, wherein said equalizer includes a resistor connected in-series with said inductor between said first and second transmission lines ~~[[of]]~~ forming said differential transmission line.

13 - 17. (Canceled)

18. (Previously Presented) The data link system of claim 1, wherein said equalizer is a filter network having a nearly constant impedance.

19. (Previously Presented) The data link system of claim 1, wherein said equalizer is a RC filter.

20. (Previously Presented) The data link system of claim 19, wherein said RC filter has a highpass response.

21. (Previously Presented) The data link system of claim 19, wherein said RC filter has a nearly constant input impedance.

22. (Currently Amended) A data link system configured to operate with a transmission line having an input and an output, the data link system comprising:

~~a differential transmission line having an input and an output;~~

a transmitter circuit with equalization coupled to said input of said transmission line; said transmitter circuit with equalization including,

a first transconductance device having a fixed gain; and

a second transconductance device, coupled in parallel with said first transconductance device, having a variable gain, and having an output coupled with a corresponding output of said first transconductance device; and

an equalizer coupled to said output of said ~~differential~~ transmission line, including an inductor between first and second transmission lines of said differential transmission line.

23. (Previously Presented) The data link system of claim 22, wherein said transmitter circuit with equalization pre-distorts said transmission line input to compensate for frequency distortion caused by said transmission line.

24. (Currently Amended) The data link system of claim 22, wherein said transmitter circuit with equalization ~~includes a de-emphasis circuit that~~ has a gain that increases with frequency across a frequency band of interest.

25 - 28 (Canceled)